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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,106	09/04/2001	Shuichi Sakanoue	212118US0PCT	2403
22850	7590	04/08/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MCAVOY, ELLEN M	
			ART UNIT	PAPER NUMBER

1764

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/926,106

**Applicant(s)**

SAKANOU ET AL.

**Examiner**

Ellen M McAvoy

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4 September 2001 (preliminary amend).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5 Dec 2001  
28 March 2003 and 10 Feb 2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Objections***

Claim 13 is objected to because of the following informalities: Claim 13 improperly depends upon claim 13. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiki et al (5,403,503).

Seiki et al ["Seiki"] discloses a refrigerator oil composition for hydrofluorocarbon refrigerants which comprises as the base oil, a polyoxyalkylene glycol derivative and/or a specific polyester compound, and, as additives, (a) an aliphatic acid partially esterified with a polyhydric alcohol, and (b) a phosphate compound and/or a phosphite compound. The polyoxyalkylene glycol derivative is set forth in column 2, lines 26-38, and in column 3, lines 21-32. Suitable polyester compounds are set forth in column 3, lines 36-64. The examiner is of the position that the base oils of Seiki meet the limitations of the synthetic oil of independent claim 1. Component (a) is found in column 5, lines 50-66, and includes partial esters of glycol, glycerol, trimethylolpropane, pentaerythritol, sorbitan and sorbitol, reacted with a saturated or unsaturated straight-chain or branched-chain monobasic aliphatic acid having 1 to 24 carbon

atoms. Seiki teaches that component (a) may be present in the oil in amounts of 0.1 to 10% by weight. Component (b) is found in column 5, line 67 to column 6, line 56, and may be present in the oil in amounts of 0.1 to 5% by weight. Thus the examiner is of the position that the refrigerator oil composition of Seiki clearly meets the limitations of the above rejected claims when the base oil is an oxygen-containing synthetic oil.

***Claim Rejections - 35 USC § 103***

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko (5,997,761) in combination with Seiki et al (5,403,503).

Kaneko discloses a refrigerating machine oil composition which comprises a mineral oil or an oxygen-containing synthetic oil and at least one species of an amine salt of an organic phosphoric acid. Suitable synthetic oils include (1) polyalkylene glycols, (2) polyvinyl ethers, (3) polyesters, (4) polyol esters, (5) carbonate derivatives, (6) polyether ketones, and (7) fluorinated oils. The polyvinyl ether compound may be represented by general formula (II) set forth in column 4. Copolymers are also taught. See formula (III) in column 5 wherein the R groups may be ether groups. The examiner is of the position that this meets the limitations of polyvinylether compound of claim 5 when R<sup>8</sup> is a hydrocarbyl group having 1 to 20 carbon atoms and k is 0. Suitable organic phosphoric acid compounds are set forth in column 17. Kaneko teaches that the refrigerating machine oil composition may be optionally blended, when necessary, with any of the conventional additives. See column 20, line 66 to column 21, top. Applicant's invention differs by further adding a partial ester of a polyalcohol and a fatty acid to

the composition. However, as evidenced by Seiki outlined above, such partial esters are well-known as additives to refrigerator oil compositions containing an oxygen-containing oil as the base oil. It is the examiners position that it would have been obvious to the skilled artisan to have added the partial esters of Seiki to the composition of Kaneko if their known imparted properties were so desired.

***Claim Rejections - 35 USC § 103***

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egawa et al (6,261,474) in combination with Seiki et al (5,403,503).

Egawa et al ["Egawa"] disclose a lubricating oil for compression-type refrigerators using a refrigerant which comprises a polyvinyl ether compound having (a) a unit represented by general formula (I) in the abstract wherein substituent R is a hydrocarbon group having 1 to 3 carbon atoms, or a polyvinyl polyether compound having units (a) and units (b) represented by general formula (I') in the abstract wherein substituent R' is a hydrocarbon group having 3 to 20 carbon atoms. Egawa teaches that R may be ethyl and R' may be isobutyl. See column 5, lines 11-20. The examiner is of the position that the polyvinyl ether base oil of Egawa having units (I) and (I') meet the limitations of the polyvinyl ether component in applicants' claims. Egawa allows for the addition of various types of additives conventionally used in lubricating oils. Such additives include phosphoric ester additives, esters of polyhydric alcohols, salts of fatty acids, and glycidyl ether compounds. Applicants invention differs by adding a specific partial ester of a polyalcohol and a fatty acid to the composition. However, as evidenced by Seiki outlined

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above, such partial esters are well-known as additives to refrigerator oil compositions containing an oxygen-containing oil as the base oil. As set forth above, it is the examiners position that it would have been obvious to the skilled artisan to have added any known refrigerant additive to the composition of Egawa if their known imparted properties were so desired.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

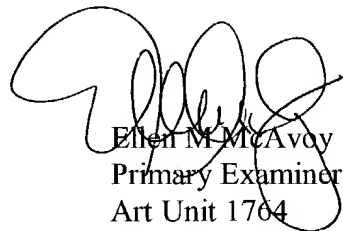
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ellen M. McAvoy  
Primary Examiner  
Art Unit 1764

EMcAvoy  
March 31, 2004